

REMARKS/ARGUMENTS

Status of the Application

The Examiner is thanked for the Office Action dated March 22, 2007. The status of the application is as follows:

- Claims 30-31 stand rejected under 35 U.S.C. §102(b) as anticipated by Ellis, *et al.* (US 5,621,454).
- Claims 1-3, 5, and 16 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Ellis, *et al.* in view of Borcezky (US 6,366,296).
- Claims 4, 6-15, and 17 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Ellis, *et al.* in view of Borcezky and further in view of Buczak, *et al.* (US 6,957,200).
- Claims 18 and 29 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Ellis, *et al.* in view of Buczak, *et al.*
- Claims 19-27 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Perlman (US 6,577,346) in view of Buczak, *et al.*
- Claim 28 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Perlman in view of Buczak, *et al.* and further in view of Ellis, *et al.*
- Claims 32 and 37 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Perlman in view of Ellis, *et al.*
- Claims 33-36 and 38-39 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Perlman in view of Ellis, *et al.* and further in view of Takenaga, *et al.*

These rejections are discussed below.

The Rejection of Claims 30 and 31 Under 35 U.S.C. §102(b)

Claims 30 and 31 stand rejected under 35 U.S.C. §102(b) as being anticipated by Ellis, *et al.* Withdrawal of this rejection is respectfully requested, as Ellis, *et al.* fails to disclose each and every element as recited in the claims.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Claims 30 and 31

Claim 30 recites *performing the algorithm at least once to detect the predetermined content in the media information stream, while employing a respective set of parameters in the algorithm for each performance thereof; and automatically evolving at least one respective set of parameters employed in the algorithm to maximize the degree of accuracy at which the algorithm detects the predetermined content in the media information stream*. Claim 31 recites similar aspects.

Ellis, *et al.* is directed towards recognition of audio/video content. In particular, Ellis, *et al.* notes that advertisers need to confirm that advertisements have been aired in their entirety as scheduled times, and that advertisers may like to know which advertisements have been aired by competitors.¹ Accordingly, Ellis, *et al.* teaches production of signatures representative of known broadcast segments that are desirably recognized. These signatures are then compared with signatures that are generated with respect to received broadcast segments to determine if a match exists. Ellis, *et al.* additionally teaches detection of broadcast segments that are unknown and generation of signatures for such unknown broadcast segments, thereby enabling these unknown segments to be recognized in the future through use of the signatures (*e.g.*, enabling the segments to go from unknown broadcast segments to known broadcast segments).

The portion of Ellis, *et al.* cited by the Examiner describes detection of unknown broadcast segments, which is in direct contrast to *detecting the predetermined content in the media information stream* as required by these claims. In more detail, Fig. 12 of Ellis, *et al.* discloses a method for detecting never-before seen broadcast segments. If the segments have never been seen, they cannot be predetermined content. Thus, this portion

¹ Ellis, *et al.*, col. 1, lines 13-18

of Ellis, *et al.* fails to disclose detection of predetermined content, but instead teaches reporting that a never-before seen broadcast segment has been detected.

Additionally, Ellis, *et al.* is deficient with respect to *automatically evolving at least one respective set of parameters employed in the algorithm to maximize the degree of accuracy at which the algorithm detects the predetermined content in the media information stream*. In contrast, the portion cited by the Examiner merely teaches that rules relating to interpretation of cues may be stored and modified in the future. It is noted that there is no disclosure in Ellis, *et al.* regarding automatically evolving a set of parameters, and it is further submitted that to do so in the confines of the teachings of Ellis, *et al.* would be impractical. Specifically, as noted above, Ellis, *et al.* discloses that the stored rules relate to detecting never before seen broadcast segments, and not predetermined content. It would be nonsensical to automatically evolve parameters when the content is unknown or new, as there can be no determination as to whether the result from analyzing the content is correct or desired. Instead, a human must analyze the results and may then change the rules to alter future results. Again, this is in direct contrast to *automatically evolving at least one respective set of parameters employed in the algorithm to maximize the degree of accuracy at which the algorithm detects the predetermined content in the media information stream* as required by this claim.

The Rejection of Claims 1-3, 5, and 16 Under 35 U.S.C. §103(a)

Claims 1-3, 5, and 16 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Ellis, *et al.* in view of Borcezky. Withdrawal of this rejection is respectfully requested, as the Examiner has failed to establish a *prima facie* case of obviousness with respect to these claims.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references

when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Claim 1

Claim 1 recites, inter alia, providing an algorithm for detecting predetermined content in the media information stream, the algorithm being a function of a set of parameters; performing the algorithm at least once to detect the predetermined content in the media information stream, while employing a respective set of parameters in the algorithm for each performance thereof; automatically evolving at least one respective set of parameters employed in the algorithm to maximize the degree of accuracy at which the algorithm detects the predetermined content in the media information stream; repeating the performing and evolving step until the at least one respective set of parameters employed in the algorithm is optimized; and implementing in a machine the algorithm with at least one respective set of the optimized parameters to detect predetermined content in the media information stream. The combination of Ellis, et al. and Borcezky fails to disclose each and every one of these claimed aspects.

As noted above, the portion of Ellis, *et al.* cited by the Examiner does not teach an algorithm for detecting predetermined content in a media information stream as required by this claim, but instead teaches identifying new segments and generating signatures for these new segments.² Also, Ellis, *et al.* is silent with regard to automatically evolving parameters when identifying new segments, but rather teaches that rules can be stored so that they can be changed in the future by a human.

The Examiner also asserts that Borcezky discloses repeating the performing and evolving step until the at least one respective set of parameters employed in the algorithm is optimized. This assertion is respectfully traversed. Borcezky discloses a graphical user interface that allows a user to locate portions of video that are assigned certain

² The portion cited by the Examiner is found directly below the subheading "New Segment Detection" in column 30.

metadata. For example, if metadata identifying a particular actor is assigned to video frames that include the actor, the graphical user interface of Borcezky would allow a user thereof to quickly jump to that frame. Borcezky also teaches that metadata can be automatically generated and assigned, but that such metadata is not always reliable, and accordingly “confidence scores” are assigned to automatically generated metadata. If the confidence score for metadata is above a threshold (assigned manually or automatically), the metadata is useable to aid in browsing of multimedia content.

The portions of Borcezky cited by the Examiner relate to assigning confidence scores for metadata and determining an appropriate threshold:

Metadata values for a media feature can be mapped to a confidence score in many different ways. As discussed above, the metadata values are preferably mapped to corresponding confidence score values using a function that is determined based on the feature corresponding to the metadata and the reliability of metadata.³

Borcezky later discloses that an example function that can be used to map metadata values to confidence score values is a learning Bayesian network:

Mapping metadata values to confidence score values can be performed according to functions that are “learned” using techniques such as learning Bayesian networks. For example, a confidence score mapping system could “learn” that metadata determined for a particular feature is more or less reliable than originally anticipated, and adjust the mapping function, e.g., a mapping threshold, accordingly.

These passages of Borcezky do not relate to *repeating the performing and evolving step until the at least one respective set of parameters employed in the algorithm is optimized*. More particularly, Borcezky does not mention repeated performance of any algorithm to maximize the degree of accuracy at which the algorithm detects predetermined content. Instead, Borcezky discloses that learning models can be used to

³ Borcezky, col. 6, lines 34-41

map metadata to confidence scores without ever mentioning repeating steps of *performing the algorithm at least once to detect the predetermined content in the media information stream, while employing a respective set of parameters in the algorithm for each performance thereof and automatically evolving at least one respective set of parameters employed in the algorithm to maximize the degree of accuracy at which the algorithm detects the predetermined content in the media information stream* as required by this claim. Accordingly, withdrawal of this rejection is respectfully requested.

Claim 16

Claim 16 recites *wherein the step of automatically evolving includes evolving the at least one respective set of parameters employed in the algorithm to generate an evolved set of parameters which is optimized to enable the algorithm to detect the predetermined content in the media information stream with a maximum degree of accuracy*. The Examiner cites Ellis, *et al.* as disclosing these aspects. As noted above, however, the portion of Ellis, *et al.* cited by the Examiner discloses identifying new broadcast segments, and not predetermined content. Moreover, there is no disclosure of evolving a set of parameters to be optimized to enable the algorithm to detect the predetermined content in the media information stream with a maximum degree of accuracy. Ellis, *et al.* merely teaches that rules used to detect new broadcast segments are stored and can be altered in the future.

The Rejection of Claims 4, 6-15, and 17 Under 35 U.S.C. §103(a)

Claims 4, 6-15, and 17 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Ellis, *et al.* in view of Borcezky and further in view of Buczak, *et al.* The rejection of these claims should be withdrawn, as the combination of these references fails to disclose each and every aspect as recited in these claims, and further because Buczak, *et al.* is not related to the field of endeavor encompassed by these claims.

In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned. *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992).

The Examiner asserts that Ellis, *et al.* is directed towards the optimization of an algorithm. It is respectfully submitted that the Examiner is mischaracterizing this reference. Ellis, *et al.* nowhere mentions optimizing an algorithm. Instead, Ellis, *et al.* teaches using signatures of broadcast segments to identify known segments and producing signatures for unknown segments so that these unknown segments can be identified in the future. Thus, Ellis, *et al.* is directed to the analysis of media content.

Borcezky teaches the use of metadata to more easily locate certain portions of multimedia. As noted above, Borcezky discloses assignment of confidence scores to metadata and use of a threshold to determine whether the confidence score is suitably high to justify use of the metadata. Accordingly, in the broadest sense, Borcezky is directed to the analysis of media content.

In comparison, Buczak, *et al.* is directed towards the selection of sensors from amongst a plurality of sensors in a military environment for the tracking of a target.⁴ It is submitted that tracking of a target through use of unattended ground sensors is not in the endeavor of analysis of media content, nor is it reasonably pertinent to identifying commercials in a multimedia stream. Accordingly, it is again submitted that Buczak, *et al.* is non-analogous art, and that this rejection should be withdrawn.

Claim 6

Even if Buczak, *et al.* is found to be analogous art, the combination of Ellis, *et al.*, Borcezky and Buczak, *et al.* fails to disclose each and every aspect as recited in these claims. In particular, claim 6 recites, *inter alia*, *determining the accuracy at which the algorithm detects the predetermined content in the media information stream for each*

⁴ Buczak, *et al.*, Abstract, col. 1, lines 45-59; col. 9, lines 40-44

performance of the algorithm. These aspects are not disclosed by Buczak, *et al.*, as alleged by the Examiner.

More particularly, Buczak, *et al.* does not determine the accuracy at which anything is detected (much less at which predetermined content in the media information stream is detected). The genetic algorithm disclosed in Buczak, *et al.* is not used to detect accuracy, as there is no standard against which to compare an output of the genetic algorithm. More particularly, with respect to the claims, since the content is predetermined, a measure of accuracy can be ascertained by comparing an output of a genetic algorithm with what is known to be true – thereby the accuracy at which the algorithm detects predetermined content can be ascertained.

In contrast, Buczak, *et al.* teaches checking to determine whether convergence criteria have been achieved. This step is described as checking as to whether the “fitness” of individuals in a selected group meets some defined fitness criteria. Buczak, *et al.* states that generally, the possible or acceptable level of fitness may not be known, so the genetic algorithm is stopped after some number of iterations or after some number of generations (iterations) or after some number of generations where there is no change in the fittest individual. In the sensor application described in Buczak, *et al.*, a genetic algorithm is used to select a set of sensors in a sensor network that can accomplish tracking a target with minimal errors while minimizing cost metrics.⁵ Accordingly, since there are numerous possible solutions and no known true solutions, there is no disclosure in Buczak, *et al.* of measuring accuracy of an output of the algorithm.

Claim 7

Claim 7 recites, *inter alia*, *further performing the algorithm at least once to detect the presence of the predetermined content in the media information stream, while employing a respective offspring set of parameters, produced in the producing step, in the algorithm for each further performance thereof.* As noted above, Buczak, *et al.* fails to disclose the detection of the presence of predetermined content. Instead, the algorithm

⁵ Buczak, *et al.*, col. 10, lines 10-13

of Buczak, *et al.* relates to selecting a to-be-determined number of sensors from amongst a network of sensors without detecting of any predetermined content.

Claim 13

Claim 13 recites, *inter alia*, *determining if the number of corresponding parameter values determined to be differing from one another is less than a predetermined incest threshold*. The Examiner asserts that the “crossover” described in Buczak, *et al.* discloses the aforementioned claimed aspects. It is submitted, however, that Buczak, *et al.* is silent with respect to any sort of “crossover” threshold – accordingly, the Examiner has failed to establish a *prima facie* case of obviousness with respect to this claim.

Claim 14

Claim 14 recites, *inter alia*, *if no offspring set of parameters remains, decreasing the predetermined incest threshold by a predetermined reduction value*. As noted above, Buczak, *et al.* does not teach or suggest any sort of incest threshold, much less decreasing an incest threshold if no offspring set of parameters remains.

The Rejection of Claims 18 and 29 Under 35 U.S.C. §103(a)

Claims 18 and 29 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Ellis, *et al.* in view of Buczak, *et al.* Withdrawal of this rejection is respectfully requested, as Buczak, *et al.* is non-analogous art. Additionally, even if Buczak, *et al.* is found to be analogous art, Ellis, *et al.* and Buczak, *et al.*, alone or in combination, fail to teach or suggest each and every aspect as recited in these claims.

As described above, Ellis, *et al.* is related to analysis of multimedia, and Buczak, *et al.* relates to locating a set of sensors in a network of sensors for tracking a target. It is again submitted tracking of a target through use of unattended ground sensors is not in the endeavor of analyzing media content, nor is it reasonably pertinent to identifying commercials in a multimedia stream.

Claim 18

Claim 18 recites *performing one or more algorithms, each to detect the presence of predetermined content in the media information stream, wherein each algorithm is a function of a corresponding chromosome; and automatically determining a value, for the chromosome of at least one of the algorithms, which enables that algorithm to detect the presence of the predetermined content in the media information stream with an increased degree of accuracy relative to the accuracy achieved when other values are employed.*

As noted above, the portion of Ellis, *et al.* cited by the Examiner do not relate to detecting present of predetermined content. Instead, such portion relates to detecting that a broadcast segment is new (and thus not detected previously) and generating a signature for such segment so that it can be detected in the future. Additionally, Buczak, *et al.* does not disclose determining a value for a chromosome that enables the algorithm to detect the presence of predetermined content... with an increased degree of accuracy relative to the accuracy achieved when other values are employed. Specifically, Buczak, *et al.* does not relate to detecting predetermined content of any sort, but rather teaches selecting sensors from amongst a plurality of sensors to track a target. Accordingly, this rejection should be withdrawn.

Claim 29

Claim 29 recites *means for performing the algorithm at least once to detect the predetermined content in the media information stream, while employing a respective set of parameters in the algorithm for each performance thereof; and means for automatically evolving at least one respective set of parameters employed in the algorithm to maximize the degree of accuracy at which the algorithm detects the predetermined content in the media information stream.*

Similar to that described above, the portion of Ellis, *et al.* cited by the Examiner fails to disclose detection of predetermined content in a media information stream. The stored rules disclosed in Ellis, *et al.* are also not automatically evolved as required by these claims. Additionally, Buczak, *et al.* does not teach maximizing a degree of accuracy at which an algorithm detects predetermined content. Rather, Buczak, *et al.*

teaches selecting a set of sensors that meet performance criteria and cost criteria (which is not maximizing a degree of accuracy). Furthermore, the genetic algorithm disclosed in Buczak, *et al.* does not disclose detecting predetermined content as required by this claim.

The Rejection of Claims 19-27 Under 35 U.S.C. §103(a)

Claims 19-27 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Perlman in view of Buczak, *et al.* This rejection should be withdrawn, as Buczak, *et al.* is non-analogous art. Further, even if Buczak, *et al.* is found to be analogous art, the combination of Perlman and Buczak, *et al.* fails to teach or suggest each and every aspect of these claims.

The Examiner asserts that Perlman is concerned with the optimization of an algorithm, and that Buczak, *et al.* is concerned with a similar problem, and optimizes an algorithm utilizing a genetic algorithm. It is submitted that this is a mischaracterization of Perlman. Perlman is directed towards the analysis of multimedia in general, and to the detection of patterns in multimedia in particular to identify a video segment.⁶ Perlman also teaches that several pattern recognition methods may be used to recognize a pattern, and provides several examples of such pattern recognition methods. Nowhere does Perlman disclose, teach, or suggest any optimization of any of these algorithms.

As noted above, Buczak, *et al.* is directed towards military operations, and in particular to selecting a set of sensors from a network of sensors to track a target. The set of sensors is selected through use of a genetic algorithm. It is submitted, however, that unlike Perlman, Buczak, *et al.* is not directed to the field of endeavor of the instant application, nor is it reasonably pertinent to analyzing multimedia (e.g., detecting commercials in a multimedia stream).

⁶ Perlman, Abstract

Claim 19

Even if Buczak, *et al.* is found to be analogous art, the combination of Perlman and Buczak, *et al.* fails to disclose each and every aspect as recited in this claim. In particular, claim 19 recites *a memory for storing a media information stream and a program, at least a portion of the program including instructions for performing a method for optimizing the performance of an algorithm for detecting predetermined content in a media information stream, the algorithm being a function of a set of parameters; and a controller coupled to said memory, said controller being operable under the control of the program stored in said memory for (a) performing the algorithm at least once to detect the predetermined content in the media information stream stored by said memory, while employing a respective set of parameters in the algorithm for each performance thereof, and (b) automatically evolving at least one respective set of parameters employed in the algorithm to maximize the degree of accuracy at which the algorithm detects the predetermined content in the media information stream.*

In particular, the Examiner asserts that Perlman teaches *performing a method for optimizing the performance of an algorithm for detecting predetermined content in a media information stream* as required by this claim. This assertion is respectfully traversed. Perlman discloses recognizing or identifying patterns in viewable video image data and/or or video sound data to identify an associated video segment.⁷ Perlman, however, is silent with regard to optimizing the performance of any algorithm used to recognize or identify patterns.

In addition, contrary to the Examiner's assertions, Buczak, *et al.* does not teach or suggest *automatically evolving at least one respective set of parameters employed in the algorithm to maximize the degree of accuracy at which the algorithm detects the predetermined content in the media information stream* as claimed. First, Buczak, *et al.* does not teach or suggest using the genetic algorithm to detect predetermined content. Second, Buczak, *et al.* is silent with respect to maximizing the degree of accuracy at which a genetic algorithm detects predetermined content. Instead, Buczak, *et al.* teaches

⁷ Perlman, col. 7, lines 7-15

balancing performance with cost when deciding which sensors in a sensor network are to be selected to track a target. Accordingly, this rejection should be withdrawn.

Claim 22

Claim 22 recites, *inter alia*, *determining the accuracy at which the algorithm detects the predetermined content in the media information stream for each performance of the algorithm*. Buczak, *et al.* does not determine the accuracy at which anything is detected (much less at which predetermined content in the media information stream is detected). Buczak, *et al.* teaches that a “fitness” of individuals in a selected population is determined. There is no teaching or suggestion in Buczak, *et al.*, however, that such fitness is a measure of accuracy at which the genetic algorithm detects predetermined content. In the sensor application described in Buczak, *et al.*, a genetic algorithm is used to select a set of sensors in a sensor network that can accomplish tracking a target with minimal errors while minimizing cost metrics.⁸ Accordingly, since there are numerous possible solutions and no known true solutions, there is no disclosure in Buczak, *et al.* of measuring accuracy of an output of the algorithm.

Claim 26

Claim 26 depends from claim 19 and recites *wherein said controller performs the evolving to generate an evolved set of parameters which is optimized to enable the algorithm to detect the predetermined content in the media information stream with a maximum degree of accuracy*. As noted above, Buczak, *et al.* does not teach detection of predetermined content, but rather discloses selecting a set of sensors in a sensor network to track a target while balancing performance with cost (*e.g.*, total energy used by the sensors at each moment in time). Thus, Buczak, *et al.* does not teach selecting sensors based upon maximum accuracy of tracking a target (as this may include the use of all sensors in the sensor network), much less optimizing an algorithm for detection of

⁸ Buczak, *et al.*, col. 10, lines 10-13

predetermined content in a media information stream with a maximum degree of accuracy.

The Rejection of Claim 28 Under 35 U.S.C. §103(a)

Claim 28 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Perlman in view of Buczak, *et al.* and further in view of Ellis, *et al.* This rejection should be withdrawn, as claim 28 is believed to be allowable at least by virtue of its dependency from independent claim 19.

The Rejection of Claims 32 and 37 Under 35 U.S.C. §103(a)

Claims 32 and 37 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Perlman in view of Ellis, *et al.* Withdrawal of this rejection is respectfully requested, as Perlman and Ellis, *et al.*, alone or in combination, fail to teach or suggest each and every aspect as recited in these claims.

Claim 32

Claim 32 as amended recites, *inter alia*, a controller coupled to said memory and said interface, said controller operating under the control of the program stored in said memory for performing a method comprising (a) performing an algorithm at least twice to detect predetermined content in a provided media information stream, while employing a respective set of parameters in the algorithm for each performance thereof, wherein the algorithm is a function of the set of parameters, (b) automatically evolving at least one respective set of parameters employed in the algorithm to determine an optimum set of parameters which maximizes the degree of accuracy at which the algorithm detects the predetermined content in the media information stream.

Both Perlman and Ellis, *et al.* relate to recognizing broadcast video segments, but neither teaches or suggests performing an algorithm at least twice to detect predetermined content in a provided media information stream as claimed. Instead, both Perlman and Ellis, *et al.* teach executing a pattern recognition algorithm a single time (as broadcast segments are received).

In addition, as noted above, in contrast to the Examiner's assertions, Ellis, *et al.* fails to teach *automatically evolving at least one respective set of parameters employed in the algorithm to determine an optimum set of parameters which maximizes the degree of accuracy at which the algorithm detects the predetermined content in the media information stream*. Instead, Ellis, *et al.* merely teaches that rules used to detect new, never-before seen segments may be changed in the future. The changing of such rules, however, is not disclosed as being automatic, and the rules are not used to maximize the degree of accuracy at which the algorithm of Ellis, *et al.* detects predetermined content. Rather, as noted above, the rules are used to detect new segments (not predetermined content). Accordingly, this rejection should be withdrawn.

The Rejection of Claims 33-36 and 38-39 Under 35 U.S.C. §103(a)

Claims 33-36 and 38-39 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Perlman in view of Ellis, *et al.* and further in view of Takenaga. This rejection should be withdrawn, as claims 33-36 and 38-39 are believed to be allowable at least by virtue of their dependencies from independent claim 32.

Other Dependent Claims

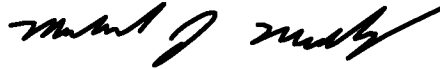
Other dependent claims not specifically mentioned above are believed to be allowable at least by virtue of their dependencies from their respective base claims.

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CONCLUSION

In view of the foregoing, it is submitted that claims 1-39 distinguish patentably and non-obviously over the prior art of record. An early indication of allowability is earnestly solicited.

Respectfully submitted,
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